

Light & Motion SOLA600

Focus and video light

By Alex Mustard

When I review products, I try and cast a critical eye over them. Despite the high quality of most gear these days, I don't see the benefit of writing reviews that say every product is wonderful. I adopt a similar approach with my photos, always looking for areas for improvement. So, with this in mind, it might be a surprise to hear straight off that the Light and Motion SOLA600 focus and video light is my standout underwater photography accessory of 2010. I'll explain.

The importance of a focus light for underwater photography is entirely dependant on what you shoot. If you favour shooting large pelagics in the open ocean or wide angle scenics on a shallow Red Sea reef, they are thoroughly unnecessary. But if you like macro, murky water or night diving then a good focus light will make the fundamental difference between getting and shot and not. Norwegian underwater photographer Christian Skaug tells me that in his home waters, he always encourages new shooters to purchase a decent focus light for their compact cameras, before even buying a strobe. There is no point taking photos if the camera

cannot focus!

Standard diving torches can be used for focusing, but with narrow beams we find we spend as much dive time adjusting their aim as concentrating on our photography. Also with a focussed bright spot of light, we are more likely to spook critters as they are suddenly exposed to the full glare on our approach. Another common solution is using the aiming lights from your strobe, however this relies on having to aim the centre of your strobe beam directly at the subject, which is not always ideal for lighting. It also requires constant fiddling with your strobe positions making it an inefficient use of dive time.

The big revolution in focus lights came with the introduction of Fisheye FIX light range, which was THE product that caused a mainstream switch from small diving torches to dedicated focus lights among serious shooters. The FIX lights first used standard bulbs and then, in the last 18 months or so, have switched over to excellent LED based units. These lights produce a really wide, soft beam meaning basically meaning



The SOLA 600 combined focus and video light. With an array of 6 white LEDs, producing up to 680 lumens, and four red LEDs, producing 225 lumens.

Comparison of the illumination produced by the SOLA 600 and FIX LED 500. Both produce wide soft beams of light, ideal for focusing. The SOLA is marginally wider, but both are excellent.



An attractive feature of the SOLA600 is its small size and weight, here photographed alongside my FIX LED 500 light.



there is no need to re-aim them during a dive. And, as I said above, many photographers have noted that the wide pool of light also seems to be less shocking to subjects. The FIX lights also raised the financial stakes, taking focus lights from the sub \$100 USD realm to that of several 100. The current range topper, the FIX LED 1000, retails around \$599 and the FIX LED 500 at £299. This is the high-end market that the SOLA600 is aimed at, retailing at \$579 (source for all prices: Backscatter.com).

I own a FIX LED500 and since many underwater photographers have experience of them it seems an ideal comparison for the key features of the SOLA600. The most obvious difference is size, the SOLA600 is about half the size and light weight (.54lbs/245g), a considerable bonus for the travelling photographer. To pretty much eliminate the risk of flooding, the SOLA600 is a completely sealed unit, charged through connectors on the back and turned on and off via a lockable magnetic switch. You push it forward and release to turn on the torch, pull it back and release to switch on the red light mode (more about this below) and pull or push it to either end and hold to switch it off. This also makes it very easy to use in thick gloves.

Both lights produce excellent white light illumination, with wide soft illumination. My tests show the SOLA600 produces a marginally wider and softer beam, but this is not a deal breaking difference. In clear waters, a wide soft beam is highly desirable. It saves us having to re-aim the light constantly and is less likely to scare a critter than a narrow spot of light. However, when visibility is low you need a narrower beam. Otherwise it is like driving in the fog with your headlights on full beam. This issue becomes significant when the visibility is less than 5m/15ft.



Underwater photographer Neil Roseworn uses the red light mode to photograph gobies on a whip coral in the Maldives. The red light mode clearly reduces how much critters are spooked by the illumination required to help focusing.

I would like to see focus light manufacturers providing beam-restricting snoots with their lights for low viz diving. The SOLA600 and FIX lights would benefit in this regard.

The FIX LED lights have a dial to vary the power output, while the SOLA600 has just three set powers for the white light, and a single power for the red light. The battery will last for several dives. A typical 60-70 minute night dive would drain it to only 50-70% on the built in battery monitor. A recharge from this point takes about an hour. So it is easily topped up between dives, if needed.

It is hard to talk about focus lights and not mention reliability. At the price, one could expect the top models to be bullet proof, but in the past, they have certainly not all been. A quick search of the internet forums will flesh out the facts. It is always tough to assess reliability during the short review period. Being such a fan of the SOLA,



Invertebrates seem the most unable to see the red light, allowing a close approach without disturbing them. Nikon D700 + 105mm VR + 1.4x teleconverter and 5T dioptr. Subal housing, twin Subtronic Alpha strobes and SOLA 600 focus light. 1/320th @ f/25.

I have been stretching out this review period to extend its stay with me! I have tested it in the Maldives, Florida, Bahamas, UK and Holland, a thorough test schedule motivated by me not wanting to have to return it. It has worked faultlessly, throughout. I have even lent it out to five other photographers, without problems.

I have a couple of reliability concerns in the design. I should restate, I have had no problems during my tests, but I feel it is worth mentioning them as areas to watch. I feel that there is a potential for the magnetic gliding switch to get clogged by sand or salt if not washed out regularly, particularly in a black sand location, like Lembeh. Light and Motion tell me that it has been designed with an extra wide tolerance to aid flushing of any debris. I also feel there is a potential problem with corrosion and wear on the exposed charging contacts, if a

lazy user regularly didn't wash and dry away salt water before charging. Again, on my test unit, they still look like new. Given the price most of us will be expecting a long life of active service. Nothing I saw made me doubt that the SOLA600 will oblige.

Perhaps the most exciting feature of the SOLA600 is the red light mode. It is often quoted that using a red light for focusing is beneficial because many species of marine life cannot see it. So you don't scare your subject in the process of focusing on it. The SOLA really works in this regard, but using it also really taught me that not all red lights are created equal. I have often added red filters to my diving lights, but have failed to notice any real advantage. This is because many red filters, while turning the light red, let through other colours too, which marine life can see. The SOLA600's red LEDs produce a very narrow spectrum of red light. You can see the difference by shining it on the cover of a magazine, a poorly filtered light will allow you to differentiate far more colours than the very pure red LEDs. These other colours will remain visible to critters, even if they cannot see the red.

The SOLA600 is the first red light that I have used that you can clearly see works in not spooking many marine species. I found the red light was most effective on

(Right) Not all dives need a focus light, but at night they are essential for ease of photography. Nikon D700 + 105mm VR and 5T dioptré. Subal housing, single Inon Z240 strobe with snoot. SOLA 600 focus light. 1/320th @ f/14.

(Far right) The red light mode allows us to stalk animals more easily, such as this sleeping parrotfish. That said fish will still react to your movements or any other disturbances. Nikon D700 + 105mm VR. Subal housing, twin Subtronic Alpha strobes and SOLA 600 focus light. 1/320th @ f/29.

invertebrates: molluscs, crustaceans, coral polyps, echinoderms etc. Many shallow water fish are clearly able to see red light, but when asleep (on night dives) it didn't wake them. It is also worth noting that while the light may be hard for critters to see, they will still detect an ungainly approach. It is not a licence to race or trash around. All of the photographers who tried this also commented positively on this aspect. In the Netherlands, one shooter even told me that they thought it even seemed to attract lobsters to the camera. Perhaps the lobsters were confused about the meaning of a red light in Holland?!

The other important advantage of the red light mode of the SOLA600, over using a filter, is that it allows you



easily to switch modes. The red light mode provides enough light to dive comfortably, but one disadvantage of staying red is that you don't see the colour of subjects. Many of the best macro photos celebrate the beauty of a fabulous creature on a beautiful background. Like the majority of photographers, I don't believe in moving subjects for the sake of my photos (and as a biologist nothing is more annoying than seeing a critter on a background it would actively avoid in the wild). To find these natural compositions, we need to be searching



in full colour. It is important that the SOLA600 lets us switch instantly back to white.

Many focus lights are now made powerful enough and white enough to be used for video. Both the SOLA600 and FIX LED lights are designed to also function as video lights for vid-SLRs. I can confirm that both are bright, soft and white. But I am I am not a videoist, so I won't comment in detail about their suitability for this function.

So to conclude, I have been really impressed with the SOLA600.



Good illumination from a focus light allows us to accurately focus on tiny subjects, such as this gorgonian shrimp. Nikon D700 + 105mm VR + 1.4x teleconverter and 5T dioptr. Subal housing, twin Subtronic Alpha strobes and SOLA 600 focus light. 1/320th @ f/32.

It is an expensive piece of kit (at just under \$600 USD,) but is an excellent performer. It produces a wide, soft pool of light, ideal for helping us focus, without having to constantly re-aim our torch. It has been a pleasure to use. The small size is a big plus for travel and for mounting on my housing. The red light mode has undoubtedly enabled me to get close encounters with marine wildlife that I have previously struggled with, ultimately helping me bag shots I hadn't been able to before. If you already own a high quality LED focus

light, it is hard to justify a purchase. But if you are a serious macro and night dive shooter then Light and Motion's SOLA600 should be high on your wish list. All the photographers who tried the one I had have already bought one or are planning to soon. Me included. It is the best focus light I have used and my standout underwater photography accessory of the last 12 months.

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